

DRAFT

NEVADA DIVISION OF ENVIRONMENTAL PROTECTION

FACT SHEET

(pursuant to NAC 445A.236)

Permittee Name: TravelCenters of America
24601 Center Ridge Road, Suite 200
Westlake, OH 44145-5634

Permit Number: NEV90016

Location: TravelCenter of Mill City
6000 E. Frontage Road
Mill City, NV 89418 (Pershing County)
Effluent from four Rapid Infiltration Basins (RIB), Outfall 001;
Latitude: 40° 41' 28"N, Longitude: 118° 03' 33"W
Township 33N, Range 35E, Section 33

Effluent from OWS #2, Outfall 002 (ditch downgradient from OWS #2);
Latitude: 40° 41' 41"N, Longitude: 118° 03' 33"W
Township 33N, Range 35E, Section 33

Effluent from Modified Sump, Outfall 003 (ditch downgradient from modified sump);
Latitude: 40° 41' 41"N, Longitude: 118° 03' 25"W
Township 33N, Range 35E, Section 33

General: TravelCenters of America (TA) operates a vehicle fueling station, truck service shop, employee's housing, a convenience store, restaurants, a laundromat and a 50-room motel. With exception of the employee housing units, domestic wastewater from the facility is presently treated in two primary facultative ponds (lagoons), which were constructed in 1991. The ponds were designed as total retention lagoons with a surface area of 1.95 acres each. Actual construction of the ponds included neither a clay nor a synthetic liner. This has resulted in leakage from the ponds to groundwater at a rate of approximately 26,500 gallons per day (gpd) (seepage rate = 0.25" per day). The percolation of wastewater through the pond bottom and sides has negatively impacted the groundwater with elevated nitrate levels. Since January 1995, nitrate as nitrogen has exceeded the Nevada MCL of 10 mg/L in Monitoring Well #1. Monitoring Wells 2, 3 and 4 have shown exceedances of the MCL since February 2002. TA was directed in the permit (Section I.A.17.a.) issued on June 20, 2002 to submit plans and specifications to provide an alternate method of effluent disposal.

TA has proposed a denitrifying wastewater package treatment plant as an alternative to the existing facultative pond system. Raw domestic wastewater will flow via gravity to an equalization chamber (wet well). From the wet well the sewage flows to a sludge holding chamber and then to an anoxic tank. The anoxic tank flows into an aeration chamber, then to a post anoxic tank, followed by a clarifier and dosing tank, and then to one of four rapid infiltration basins (RIB). The two former primary facultative ponds are to be converted to four RIBs. The RIBs are to be equipped with staff gauges so that water depth can be measured on a routine basis.

With the exception of the employee housing units, domestic wastewater from the facility will be treated with the proposed package treatment plant. The employee housing units are serviced by individual sewage disposal systems.

TA submitted a complete application and 100% Plans and Specifications for a major modification to the TA-Mill City sewage treatment and disposal system. The plans for a package treatment plant were approved by the Technical Services Branch of the Bureau of Water Pollution Control on June 2, 2005. TA proposes to use components of the existing system (the facultative ponds, with modifications, and the collection system) and to add a denitrifying wastewater treatment package plant.

As part of the permit modification process, TA also proposes to replace the existing four oil/water separators (OWS) that are located and operating (unpermitted) at the facility with one modified sump and one OWS. TA enlisted the services of a consultant who, after evaluation of the present system, recommended the current OWS system be replaced with a new system because the current system is incapable of adequate wastewater treatment. The type of waste to be treated includes stormwater combined with oil products, sand and trash collected from the truck parking lot. Three sumps located on the south side of the parking area will drain to a modified sump (500 gallon capacity). This modified sump provides for the separation of oil, sand and trash from the stormwater. The treated water is to be discharged into a ditch downgradient from the modified sump. The ditch water then either evaporates or percolates into groundwater. The new OWS is a three-basin (5,000 gallons) interceptor, located northwest of the parking/fueling area. It will receive wastewater generated from the pressure washing of the fueling islands. Treated effluent from the interceptor is to be discharged into a ditch downgradient from the interceptor. The contents of the modified sump and the OWS are to be pumped on an annual basis. The pumped materials are to be disposed of in a manner approved by the Division.

Receiving Water Characteristics: The direction of groundwater flow is to the west-northwest towards the Humboldt River, which is located approximately two-thirds of a mile downgradient of the existing wastewater disposal system and the location of the proposed denitrifying package treatment plant. This area is located approximately 75 feet horizontally above the river.

Downgradient Monitoring Well #2 (MW-2, approximately 250 ft. downgradient and northwest of the two ponds) has shown exceedances in the nitrate concentrations since June 2001. The average nitrate concentration from MW-2 from December 2000 to December 2004 was 14.7 mg/L. Monitoring Well #3 (MW-3), also downgradient, measured an average of 11.4 mg/L from February 2002 to December 2004. The two upgradient monitoring wells (MW-1 and MW-4) have also exceeded the MCL for nitrate. For compliance purposes MW-2 will be considered as the point of compliance, however MW-1, MW-3 and MW-4 shall continue to be sampled as per Table 2 below. The Permittee may request a reduction in monitoring frequencies after the results of sampling, consistently show at least one year's data with a concentrations of ≤ 7.0 mg/l total nitrogen as N.

Flow: The facility's permitted flow limits 0.025 MGD (25,000 gpd, 30 day average) and 0.0325 MGD (32,500 gpd, daily maximum) are within the design limitations established by the manufacturer of the package treatment plant (Ashbrook Simon-Hartley Operations, LP) which are 0.025 MGD, 30 day average and 0.0325 MPG, daily maximum.

Proposed Effluent Limitations and Special Conditions:

Table 1: Plant Discharge Limitations

PARAMETER	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS	
	30-Day Average	Daily Maximum	Measurement Frequency	Sample Type
Flow (Influent)	0.025 MGD (25,000 gpd)	0.0325 (32,500 gpd)	Continuous	Wet Well Pump ¹
BOD ₅ , mg/L (Influent) ²	Monitor & Report		Quarterly	Composite
BOD ₅ , mg/L (Effluent) ³	30	45	Quarterly	Discrete
TSS, mg/L (Influent) ²	Monitor & Report		Quarterly	Composite
TSS, mg/L (Effluent) ³	30	45	Quarterly	Discrete

Nitrate as N, mg/L (Effluent) ³	Monitor & Report	Quarterly	Discrete
Total Nitrogen as N, mg/L (Effluent) ³	10	Quarterly	Discrete
pH (Effluent) ³	6.0 to 9.0 Standard Units	Quarterly	Discrete
Depth of Effluent in RIBs	Monitor & Report	Weekly	Discrete Staff Gauge Reading

¹: Pumping volume (gpm)*Pump run time (minutes)*1440 min/day=gallons/day

²: Influent samples to be collected at inlet to wet well

³: Effluent samples to be collected at outlet from dosing tank

MGD: million gallons per day; gpd: gallons per day; mg/L: milligrams per liter

Table 2: Modified Sump - Oil/Water Separator Limitations

Parameter	Discharge Limitations (mg/L)	Monitoring Requirements ^{4, 5, 6}	
		Frequency	Sample Type
Arsenic	0.05	Annually	Discrete
Barium	2.0	Annually	Discrete
Cadmium	0.005	Annually	Discrete
Chromium	0.10	Annually	Discrete
Lead	0.0015	Annually	Discrete
Benzene	0.005	Annually	Discrete
Chlorobenzene	0.10	Annually	Discrete
Ethylbenzene	0.7	Annually	Discrete
Methylene Chloride	0.005	Annually	Discrete
Trichloroethylene (TCE)	0.005	Annually	Discrete
Tetrachloroethylene (PCE)	0.005	Annually	Discrete
Toluene	1.0	Annually	Discrete
Xylene	10.0	Annually	Discrete
MTBE	Monitor & Report	Annually	Discrete
Total Petroleum Hydrocarbons (TPH)	Monitor & Report	Annually	Discrete
Pumping and Disposal	Monitor & Report	Annually	⁷

⁴: If no effluent discharge to groundwater has occurred during the annum, then so state in the annual (4th quarter report)

⁵: Samples to be collected and analyzed only if treated effluent discharges from the modified sump or OWS during the annum.

⁶: Sampling location is the discharge pipe from the OWS holding tank outlet.

⁷: Modified Sump and OWS to be pumped annually and contents to be disposed of in a manner approved by the Division

Table 3: Groundwater Monitoring

PARAMETER	DISCHARGE LIMITATIONS	MONITORING REQUIREMENTS ⁸	
		Measurement Frequency ⁹	Sample Type
TDS, mg/L	Monitor & Report	Quarterly	Discrete
Chlorides, mg/L	Monitor & Report	Quarterly	Discrete
Nitrate as N, mg/L	10.0	Quarterly	Discrete
Total Nitrogen as N, mg/L	10.0	Quarterly	Discrete
Depth to Groundwater, feet	Monitor & Report	Quarterly	Field Measurement

⁸: Sample or measure each monitoring well (MW-1, MW-2, MW-3, MW-4)

⁹: The Permittee may request a reduction in monitoring frequencies after the results of sampling, consistently show at least one year's data with concentrations of ≤ 7.0 mg/l total nitrogen as N.

Schedule of Compliance: The Permittee shall submit the following items to the Division for review and approval:

- Permittee shall operate and monitor in accordance with the terms and conditions of the existing permit, NEV90016, until the proposed denitrifying wastewater treatment is constructed and operating.
- Within ninety (90) days of constructing the proposed denitrifying wastewater treatment packaged plant an Operations and Maintenance (O&M) Manual shall be submitted. The minimum requirements for preparing an O&M Manual are specified in the Division's WTS-2 guidance document entitled *Minimum Information Required for an Operations and Maintenance Manual*.
- Within 30 days of completing construction, Permittee shall submit a letter of Construction Quality Assurance, stamped by a Nevada registered engineer, and "as built" plans, if construction varies significantly from the plans approved by the Division.
- By October 17, 2005, Permittee shall complete construction of new wastewater treatment system (package treatment plant) pursuant to Compliance Order dated December 3, 2004.

Rationale for Permit Requirements: The NDEP's rationale for the proposed monitoring conditions is as follows:

Flow: Flow is tracked to ensure that treatment design capacity is not exceeded.

Effluent limits: Effluent limits are established and monitored to ensure that the denitrifying package wastewater treatment plant is functioning in accordance with design criteria.

Groundwater Monitoring: The drinking water MCL for nitrate is 10 mg/L. All monitoring wells have shown an exceedance of the drinking water MCL. The denitrifying wastewater treatment plant is designed to reduce total nitrogen from being discharged to groundwater. MW-2 shall be the point of compliance for this discharge permit. MW-1, MW-3 and MW-4 shall continue to be monitored in order to demonstrate that groundwater nitrogen is decreasing and that the denitrifying wastewater treatment plant is being operated in accordance with design.

Procedures for Public Comment: The Notice of the Division's intent to issue a permit, with proposed modifications authorizing the facility to operate the existing facultative ponds, subject to the conditions contained within the permit, is being sent to the **Reno Gazette-Journal** and **Lovelock Review-Miner** for publication. The notice is being mailed to interested persons on our mailing list. Anyone wishing to comment on the proposed permit can do so in writing for a period of thirty (30) days following the date of publication of the public notice in the newspaper. The comment period can be extended at the discretion of the Administrator. The deadline date and time by which all written comments are to be postmarked (via mail) or transmitted to the Division via fax or e-mail is **September XX, 2005 by 5:00 P.M., PST.**

A public hearing on the proposed determination can be requested by the applicant, any affected State, any affected interstate agency, the Regional Administrator or any interested agency, person or group of persons.

The request must be filed within the comment period and must indicate the interest of the person filing the request and the reasons why a hearing is warranted.

Any public hearing determined by the Administrator to be held must be conducted in the geographical area of the proposed discharge or any other area the Administrator determines to be appropriate. All public hearings must be conducted in accordance with NAC 445A.238.

The final determination of the Administrator may be appealed to the State Environmental Commission pursuant to NRS 445A.605.

Proposed Determination: The Division has made the tentative determination to issue (modify) the proposed permit with the expiration date remaining at June 19, 2007. The Schedule of Compliance Requirements contained within the permit conditions require the Permittee to provide an alternate means of effluent disposal, which is protective of State groundwater resources. Upon approval of this alternate disposal method, the Permittee shall make appropriate application to the Division to revise the permit limitations to reflect the new wastewater treatment and disposal facility.

Prepared by: James T. Hogan
Staff Engineer II
Bureau of Water Pollution Control
July 15, 2005